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## NOTICE OF ALLOWANCE AND FEE(S) DUE

53080 7590 03/28/2012  
MCDERMOTT WILL & EMERY LLP  
600 13TH STREET, NW  
WASHINGTON, DC 20005-3096

EXAMINER

HAN, KWANG S

ART UNIT

PAPER NUMBER

1727

DATE MAILED: 03/28/2012

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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I0/585,078

06/29/2006

Kazuhiro Sugie

043888-0489

6192

TITLE OF INVENTION: LONG LIFE AND LOW CORROSION LEAD STORAGE BATTERY WITH A SEPARATOR INCLUDING SILICA AND OIL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1740	\$300	\$0	\$2040	06/28/2012

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

### HOW TO REPLY TO THIS NOTICE:

#### I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

## PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**  
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**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**  
**or Fax** **(571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

53080 7590 03/28/2012  
**MCDERMOTT WILL & EMERY LLP**  
**600 13TH STREET, NW**  
**WASHINGTON, DC 20005-3096**

## Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/585,078

06/29/2006

Kazuhiro Sugie

043888-0489

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TITLE OF INVENTION: LONG LIFE AND LOW CORROSION LEAD STORAGE BATTERY WITH A SEPARATOR INCLUDING SILICA AND OIL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1740	\$300	\$0	\$2040	06/28/2012

EXAMINER	ART UNIT	CLASS-SUBCLASS
HAN, KWANG S	1727	429-225000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

1 \_\_\_\_\_

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

2 \_\_\_\_\_

3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY AND STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

☐ Issue Fee

☐ Publication Fee (No small entity discount permitted)

☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

☐ A check is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,078	06/29/2006	Kazuhiro Sugie	043888-0489	6192

  

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EXAMINER
HAN, KWANG S

  

ART UNIT	PAPER NUMBER
1727	

  

DATE MAILED: 03/28/2012

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 791 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 791 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

## Privacy Act Statement

**The Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

**Notice of Allowability**

Application No.

10/585,078

Examiner

Kwang Han

Applicant(s)

SUGIE ET AL.

Art Unit

1727

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on December 29, 2011.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are 1-6 and 8-16.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has **THREE MONTHS FROM THE "MAILING DATE"** of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_.

**LONG LIFE AND LOW CORROSION LEAD STORAGE BATTERY WITH A  
SEPARATOR INCLUDING SILICA AND OIL**

Examiner: K. Han    SN: 10/585,078    Art Unit: 1727    March 25, 2012

**Detailed Action**

1.     The Applicant's amendment filed on December 29, 2011 was received. Claims 17 and 18 were added.
2.     The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Specification***

3.     The objection to the specification has been withdrawn in view of the amendment to the title.

**EXAMINER'S AMENDMENT**

4.     An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Nathaniel McQueen on March 13, 2012.

IN THE CLAIMS:

Art Unit: 1727

1. (Currently amended) A lead storage battery including:

an electrode plate pack comprising a plurality of negative electrode plates which each comprise a negative electrode grid having a tab and a negative electrode active material layer retained by said negative electrode grid, a plurality of positive electrode plates which each comprise a positive electrode grid having a tab and a positive electrode active material layer retained by said positive electrode grid, and a plurality of separators separating said positive electrode plate and said negative electrode plate;

a positive electrode connecting member comprising a positive electrode strap to which said tab of each positive electrode plate of the electrode plate pack is connected, and a positive electrode pole or a positive electrode connecting body provided at said positive electrode strap; and

a negative electrode connecting member comprising a negative electrode strap to which said tab of each negative electrode plate of the electrode plate pack is connected, and a negative electrode pole or a negative electrode connecting body provided at said negative electrode strap,

wherein said positive electrode grid, said negative electrode grid, said positive electrode connecting member, and said negative electrode connecting member comprise a Pb-alloy including at least one of Ca and Sn,

said negative electrode active material layer includes Sb,

said separator includes silica and contains 5.0 to 30 % by mass of an oil, and

Art Unit: 1727

said electrode plate pack, said positive electrode strap, and said negative electrode strap are immersed in an electrolyte such that the level of the electrolyte is always above the electrode plate pack, the positive electrode strap and the negative electrode strap.

2. (Original) The lead storage battery in accordance with claim 1, wherein said separator comprises a microporous synthetic resin sheet and silica particles dispersed in said synthetic resin sheet, and includes 40 to 85 % by mass of said silica particles.

3. (Original) The lead storage battery in accordance with claim 1, wherein said separator comprises a fiber mat and silica particles retained by said fiber mat, and includes 10 to 40 % by mass of said silica particles.

4. (Original) The lead storage battery in accordance with claim 1, wherein said negative electrode active material layer includes 0.0002 to 0.006 parts by mass of said Sb per 100 parts by mass of the negative electrode active material and Sb in total.

5. (Original) The lead storage battery in accordance with claim 1, wherein said positive electrode grid has a lead alloy layer containing Sn in at least a part of a surface thereof.

6. (Original) The lead storage battery in accordance with claim 1, wherein said separator is shaped like a bag, and accommodates said negative electrode plate.

7. (Cancelled)



Art Unit: 1727

8. (Original) The lead storage battery in accordance with claim 1, wherein a mass ratio of the negative electrode active material to the positive electrode active material in said electrode plate pack is 0.7 to 1.3.

9. (Original) The lead storage battery in accordance with claim 1, wherein said negative electrode grid is an expanded grid comprising an expanded mesh retaining said negative electrode active material layer, a frame provided at an upper edge portion of said expanded mesh, and said tab connected to said frame, and a ratio of a height of said tab to a width of said frame is 2.2 to 15.0.

10. (Currently amended) A lead storage battery including:  
an electrode plate pack comprising a plurality of negative electrode plates which each comprise a negative electrode grid having a tab and a negative electrode active material layer retained by said negative electrode grid, a plurality of positive electrode plates which each comprise a positive electrode grid having a tab and a positive electrode active material layer retained by said positive electrode grid, and a plurality of separators separating said positive electrode plate and said negative electrode plate;

a positive electrode connecting member comprising a positive electrode strap to which said tab of each positive electrode plate of the electrode plate pack is connected, and a positive electrode pole or a positive electrode connecting body provided at said positive electrode strap; and

a negative electrode connecting member comprising a negative electrode strap to which said tab of each negative electrode plate of the electrode plate pack is

Art Unit: 1727

connected, and a negative electrode pole or a negative electrode connecting body provided at said negative electrode strap,

wherein said positive electrode grid, said negative electrode grid, said positive electrode connecting member, and said negative electrode connecting member comprise a Pb-alloy including at least one of Ca and Sn,

said negative electrode active material layer includes Sb,

said separator includes silica and contains 5.0 to 30 % by mass of an oil,

the mass ratio of the negative electrode active material to the positive electrode active material in said electrode plate pack is 0.7 to 1.3, and

said electrode plate pack, said positive electrode strap, and said negative electrode strap are immersed in an electrolyte such that the level of the electrolyte is always above the electrode plate pack, the positive electrode strap and the negative electrode strap.

11. (Previously Presented) The lead storage battery in accordance with claim 1, wherein said Pb-alloy in said positive electrode grid and said positive electrode connecting member does not include Sb, or contains Sb in an amount of 0.001 to 0.002% by mass as an impurity; and

said Pb-alloy in said negative electrode grid and said negative electrode connecting member does not include Sb, or contains Sb in an amount of less than 0.0001% by mass as an impurity.

Art Unit: 1727

12. (Previously Presented) The lead storage battery in accordance with claim 10, wherein said Pb-alloy in said positive electrode grid and said positive electrode connecting member does not include Sb, or contains Sb in an amount of 0.001 to 0.002% by mass as an impurity; and

said Pb-alloy in said negative electrode grid and said negative electrode connecting member does not include Sb, or contains Sb in an amount of less than 0.0001% by mass as an impurity.

13. (Previously Presented) The lead storage battery in accordance with claim 9, wherein a ratio of a height of said tab to a width of said frame is 7.5 to 12.0.

14. (Previously Presented) The lead storage battery in accordance with claim 10, wherein the mass ratio of the negative electrode active material to the positive electrode active material in said electrode plate pack is 0.82 to 1.08.

15. (Previously Presented) The lead storage battery in accordance with claim 1, wherein said separator contains 10 to 30% by mass of the oil.

16. (Previously Presented) The lead storage battery in accordance with claim 10, wherein said separator contains 10 to 30% by mass of the oil.

17-18. (Cancelled)

***Claim Rejections - 35 USC § 103***

5. The claim rejection under 35 U.S.C. 103(a) as unpatentable over Yonemura in view of Ohba et al., Haruno et al., and Doi et al. on claims 1-6, 9, 11, 13, and 15 is withdrawn, because of the examiners amendment.
6. The claim rejection under 35 U.S.C. 103(a) as unpatentable over Yonemura in view of Ohba et al., Haruno et al., and Doi et al. as applied to claim 1 and further in view of Carlisle on claim 8 is withdrawn, because of the examiners amendment.
7. The claim rejection under 35 U.S.C. 103(a) as unpatentable over Yonemura in view of Ohba et al., Haruno et al., and Doi et al. on claim 10, 12, 14, 16 is withdrawn, because of the examiners amendment.

***Reasons for Allowance***

8. The following is an examiner's statement of reasons for allowance: Claims 1-6 and 8-16 are allowed. Independent claims 1 and 10 are both directed towards a lead storage battery comprising an electrode pack wherein the positive electrode grid, negative electrode grid, positive electrode connecting member, negative electrode connecting member comprise a Pb-alloy including at least one of Ca and Sn, negative electrode active material layer includes Sb, separator includes silica and contains 5.0 to 30% by mass of an oil and said electrode plate pack, positive electrode strap, and negative electrode strap are immersed in an electrolyte such that the level of the electrolyte is always above the electrode plate pack, the positive electrode strap and the negative electrode strap. The closest prior art of record of Yonemura, Ohba et al.,

Art Unit: 1727

Haruno et al., and Doi et al. do not disclose a lead storage battery as required by the limitations of the claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Contact/Correspondence Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwang Han whose telephone number is (571) 270-5264. The examiner can normally be reached on Monday through Friday 8:00am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Barbara Gilliam can be reached on (571) 272-1330. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1727

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. H./

Examiner, Art Unit 1727